

10/557605

IAP20 Rec'd PCT/PTO 22 NOV 2005

Amended Claims under PCT Article 19

New CLAIMS **IAP20 Rec'd PCT/PTO 22 NOV 2005**

1. A method for producing a decorative laminate comprising a carrying layer comprising the following steps:
 - impregnating a substrate with a thermosetting and further impregnating the so impregnated substrate with a dispersion comprising thermally expandable microspheres thereby forming a layered material;
 - assembling the carrying layer with a decorative layer impregnated with a thermosetting;
 - assembling the carrying layer and the layered material whereby the layered material is positioned underside and the decorative layer is positioned topside the carrying layer.
2. A method according to claim 1 wherein the decorative layer is impregnated with a melamine resin.
3. A method according to any of the preceding claims wherein the layered material forms the outermost underside of the decorative laminate.
4. A method according to any of the preceding claims, wherein the method comprises expanding the microspheres.
5. A method according to any of the preceding claims, comprising the step of heating at least the layered material without pressing above the temperature at which the microspheres start to expand.
6. A method according to any one of the preceding claims, wherein the layered material comprises a paper.

AMENDED SHEET



7. A method according to any one of the preceding claims, wherein the laminate is a decorative flooring material.
8. A method according to any one of the preceding claims, wherein the laminate is a parquet flooring material.
9. A method according to any of the preceding claims wherein the thermally expandable microspheres are dispersed in a thermoplastic polymer.
10. A method according to claim 8, wherein the thermoplastic polymer has a glass transition temperature between -100°C and $+10^{\circ}\text{C}$, preferably between -80°C and -20°C .
11. A layered material comprising a carrying layer, a decorative layer and a layered material wherein the layered material comprises a substrate which is impregnated with a thermosetting and is further coated with a dispersion comprising expandable microspheres, and wherein said layered material is positioned underside and the decorative layer is positioned topside the carrying layer.
12. A layered material according to claim 11 wherein the microspheres are dispersed within a thermoplastic polymer.
13. A layered material according to claim 12 wherein the thermoplastic polymer has a glass transition temperature between -100°C and $+10^{\circ}\text{C}$, preferably between -80°C and -20°C .
14. A layered flooring material obtainable by a method comprising impregnating a substrate with a thermosetting, further coating or impregnating the so impregnated substrate with thermally expandable microspheres and bringing together the so impregnated substrate with a carrying layer comprising topside a decorative layer impregnated with a thermosetting, wherein said substrate is positioned underside the carrying layer.

15. A layered flooring material obtainable according to claim 14 wherein the thermally expandable microspheres are dispersed in a continuous phase comprising a thermoplastic polymer preferably having a glass transition temperature between -100°C and $+10^{\circ}\text{C}$, preferably between -80°C and -20°C .
16. A layered flooring material obtainable according to claim 14 or 15 wherein the heating is conducted under substantial pressure.
17. A layered material according to any of the claims 11-16, wherein the disperse phase comprises a polyurethane.
18. A layered material according to any of the claims 11-17, wherein the substrate is a paper.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 42 832 K	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/005378	International filing date (day/month/year) 19/05/2004	(Earliest) Priority Date (day/month/year) 23/05/2003
Applicant COVERIGHT SURFACES SWEDEN AB		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/005378

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B32B21/00 E04F15/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B32B E04F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 726 986 A (CANNADY JR DANIEL L ET AL) 23 February 1988 (1988-02-23) column 2, line 44 - column 7, line 60; claims; figures; example	1-4,6, 12,15, 17,19,21
X	EP 1 254 984 A (JOHNS MANVILLE EUROP GMBH) 6 November 2002 (2002-11-06) paragraphs '0016! - '0040!; claims; example	1,2,6, 10-16,21
X	US 2001/007710 A1 (IRELAND DOUGLAS ET AL) 12 July 2001 (2001-07-12) paragraphs '0003! - '0027!; examples -/--	1-6,8, 12,15,21

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

5 August 2004

Date of mailing of the international search report

17/08/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Hutton, D

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/005378

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 486 (M-1473), 3 September 1993 (1993-09-03) & JP 05 118122 A (SEKISUI CHEM CO LTD), 14 May 1993 (1993-05-14) abstract paragraphs '0007! - '0021!; examples -----	1-22
A	GB 2 217 630 A (EMHART MATERIALS UK) 1 November 1989 (1989-11-01) example 5 -----	18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/005378

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4726986	A	23-02-1988	NONE	
EP 1254984	A	06-11-2002	EP CA	1254984 A1 2385108 A1
				06-11-2002 04-11-2002
US 2001007710	A1	12-07-2001	AU WO	2243101 A 0145940 A1
				03-07-2001 28-06-2001
JP 05118122	A	14-05-1993	NONE	
GB 2217630	A	01-11-1989	NONE	